



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,366	04/01/2004	Dennis J. Chirhart	59678US002	8234

32692 7590 02/10/2006

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

AHMAD, NASSER

ART UNIT	PAPER NUMBER
----------	--------------

1772

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,366

Applicant(s)

CHIRHART ET AL.

Examiner

Nasser Ahmad

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) 24-80 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 81 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/6/05, 5/14/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: IDS: 4/22/04, 12/8/05.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-23 and 81 in the reply filed on January 13, 2006 is acknowledged.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 7-11, 17, 20-23 and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coderre (6325515).

Coderre relates to a retroreflective laminate (24) having a viewing surface and comprising a retroreflective layer (figure-5) and a plurality of discrete pigmented indicia (16) disposed on a viewing surface side thereof. However, Coderre fails to teach that the cap-Y value of the pigmented layer is less than the cap-Y value of the retroreflective layer. It would have been obvious to one having ordinary skill in the art to provide the pigmented layer of Coderre to have a lower cap-Y value because of the presence of the pigments that lowers the reflectivity of the layer.

As shown in figure-5, the retroreflective layer is cube cornered with a plurality of cube cornered surface structure, including at least two intersecting sets of parallel grooves. The overlay layer (34) is substantially transparent or transparent color layer and the pigmented indicia are disposed on a rear surface of the overlay layer.

Art Unit: 1772

Figures 1A and 1B shows that the indicia are a plurality of parallel stripes in the web direction, wherein the plurality of stripes (3a) appears to be of uniform stripe width of 0.1 to 2 mm, and covers about 10-80% of the surface.

As for the brightness value of the pigmented layer being less than that of the retroreflective layer, it would have been obvious because a pigmented layer would provide for less brightness than a retroreflective layer which would reflect more light. For the indicia layer brightness being less than about 705 of the retroreflective layer, it would have been obvious, based on optimization through routine experimentation, to provide visibility of the indicia.

The sheeting includes an adhesive layer (28) and a release liner (30) thereon.

4. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bailey (4983436).

Bailey relates to a retroreflective sheeting (44) having a viewing surface comprising a retroreflective layer (figure-4) and a plurality of discrete pigmented indicia (50) disposed on a viewing surface side thereof. However, Bailey fails to teach that the cap-Y value of the pigmented layer is less than the cap-Y value of the retroreflective layer. It would have been obvious to one having ordinary skill in the art to provide the pigmented layer of Bailey to have a lower cap-Y value because of the presence of the pigments that lowers the reflectivity of the layer.

5. Claims 12-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coderre.

Art Unit: 1772

Coderre, as discussed above, fails to teach that the stripe density is 2-10 per cm., that the strips vary in width, that the strips are not continuous. It would have been obvious to one having ordinary skill in the art to optimize the stripe density in the invention of Coderre by providing 2-10 stripes per cm. For providing optimum control of retroreflectivity of the indicia.

Similarly, the stripe having varying width, the stripes being offset from an adjacent set or not being continuous are also properties that determine the optimum retroreflectivity of the indicia layer.

Further, it would have been obvious to one having ordinary skill in the art to substitute black or gray color or opaque ink, for example instead of red, because it would still provide for a colored view of the indicia while controlling the retroreflectivity.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser Ahmad whose telephone number is 571-272-1487. The examiner can normally be reached on 7:30 AM to 5:00 PM, and on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Nasser Ahmad
Primary Examiner
Art Unit 1772
2/6/06

N. Ahmad.
February 6, 2006.